RCA Amateur Radio Club
Indianapolis, IN

www.w9rca.org

FEBRUARY 2021 MONTHLY NEWSLETTER

A VIRTUAL ZOOM MEETING WILL BE SCHEDULED FOR
TUESDAY FEBRUARY 9th AT 7:00 EST
INVITATIONS TO JOIN WILL BE EMAILED BY FEBRUARY 8th

RCA ARC NEWS

THE FEBRUARY 9th MEETING – For the February 9th meeting, we shall again use a Zoom virtual meeting. The meeting will start at 7:00 pm and is being hosted on the Indiana ARRL Section Zoom courtesy of the Indiana SCM Jimmy Merry, KC9RPX.

You will receive an email message with a link, meeting ID and password by February 8th. If you can access your emails by your smart phone, then you can join using it. If you join using your desktop or laptop and do not have a video camera, then it will join you with audio only assuming you have some type of microphone connected to the computer. If not, then you will be logged as listen only. You can also use your phone and call in using the numbers listed in the email for the session.

JANUARY MEETING SUMMARY – Thanks to all who attended our January Zoom meeting. Jim K9RU announced we have paid the insurance for another year. One of our biggest expenses. Jim also reported on the license testing activities and challenges during the pandemic. The VHF and RTTY contests where discussed and commented on. K9RU claims approximately 150 contacts in the RTTY contest. Our Club will again participate in Field Day this year and make a monetary contribution. The remainder of the meeting was a social gathering

AMATEUR RADIO LICENSE TEST SESSION

Time: Saturday, February 13, 2021, **Is Closed**

The next test session will be: March 13, 2021 Starting at 12:00 pm **by appointment only**.
(Required: FRN and completed form NCVEC 605. A face mask is required)

Location: Salvation Army EDS Training Facility, 4020 Georgetown Rd
Indianapolis, IN 46254-2407

Contact: **Jim Rinehart, k9ru@arrl.net, 317 721-1458**

HAMFESTS, OPERATING EVENTS, VOLUNTEER OPPORTUNITIES

Feb 6	HENDRICKS COUNTY HAMFEST - Canceled
Feb 8-12	SCHOOL CLUB ROUNDUP - http://www.arrl.org/school-club-roundup

Feb 20-21	ARRL DX CONTEST CW - http://www.arrl.org/arrl-dx
Feb 26	LAPORTE COUNTY ARC HAMFEST – Canceled
Mar 6-7	ARRL DX CONTEST PHONE - http://www.arrl.org/arrl-dx
May 21-23	DAYTON HAMVENTION - cancelled
July 9-10	INDIANAPOLIS HAMFEST – IndyHamfest.com

For more contest info: https://www.contestcalendar.com/contestcal.html

NEIL RAPP, WB9VPG, OF BLOOMINGTON, INDIANA, IS THE 2021 RECIPIENT OF THE CAROLE PERRY EDUCATOR OF THE YEAR AWARD.

Orlando HamCation® has announced that ARRL Life Member Neil Rapp, WB9VPG, of Bloomington, Indiana, is the 2021 recipient of the Carole Perry Educator of the Year Award. The award recognizes an outstanding individual contribution in educating and advancing youth in amateur radio. It was first awarded in 2018 to its namesake, Carole Perry, WB2MGP, in honor of her work as an educator teaching students about ham radio. Rapp was ARRL 2004 Professional Educator of the Year. He's an Assistant Central Division Director and an ARRL VEC certified examiner.

An educational professional for more than 28 years, Rapp currently teaches chemistry at Bloomington High School South. He's also the school's amateur radio club sponsor and has introduced 3,600 students and parents to amateur radio through his involvement in the organization. Among his educational achievements, he was able to send an experiment involving protein crystallization to the International Space Station (ISS). He also mentored 2013 *Amateur Radio Newsline* Young Ham of the Year and ARRL William R. Goldfarb Memorial Scholarship recipient Padraig Lysandrou, KC9UUS.

Rapp got his license when he was 5 years old, and, at the time, was touted as the world's youngest ham. Now 50, he's the host and founder of the amateur radio podcast *Ham Talk Live!* He's also a member of AMSAT and was the youngest person to both join and be eligible for membership in the Quarter Century Wireless Association (QCWA). He is the editor of the "Next-Gen Contesters" column for *NCJ*.

2021 SKYWARN SPOTTER TRAINING, INDIANAPOLIS OFFICE

It is that time of year to start thinking about spotter talks. NWS staff are not allowed to attend meetings or give talks in-person so wemust proceed with live, online spotter training for this year. Please forward this information to your staff, spotters, amateur radio operators and feel free to publicize any way you can. All NWS Indianapolis spotter talks this Spring will be held virtually and live. We will use GotoWebinar software, which can host up to 1000 people per session. Six public sessions have been scheduled, scattered across various days and times in March. Those times are listed below.

Pre-registration will be required, name, home county, call sign and contact email address.

Anyone can attend any of these 6 sessions as the training will be identical in content and each will be around 90 minutes. Unfortunately due to copyright issues and privacy concerns, these webinars will not be recorded. Other opportunities for online training exist and will be shared during this training. Below are the dates, times and registration links for each training opportunity. People only need to attend 1 of these sessions, but they must make sure they register using the unique URL for the date they wish to attend.

This information and registration links are also available on our spotter training website at https://www.weather.gov/ind/Spotter

After registering, you will receive a confirmation email containing information about joining the webinar.

Please register for NWS Indianapolis Spotter Training Webinar – March 6th, 2021 on Mar 6, 2021 10:00 AM EST at: https://attendee.gotowebinar.com/regi.../7199577262341979664

Please register for NWS Indianapolis Spotter Training Webinar – March 8th, 2021 on Mar 8, 2021 6:30 PM EST at: https://attendee.gotowebinar.com/regi.../1006691268592279824

Please register for NWS Indianapolis Spotter Training Webinar – March 10th, 2021 on Mar 10, 2021 4:00 PM EST at: https://attendee.gotowebinar.com/regi.../2011932968426083600

Please register for NWS Indianapolis Spotter Training Webinar – March 13th, 2021 on Mar 13, 2021 10:00 AM EST at: https://attendee.gotowebinar.com/regi.../7925758513000692496.

Please register for NWS Indianapolis Spotter Training Webinar – March 22nd, 2021 on Mar 22, 2021 6:30 PM EDT at: https://attendee.gotowebinar.com/regi.../3726590565617200144

Please register for NWS Indianapolis Spotter Training Webinar – March 24th, 2021 on Mar 24, 2021 2:00 PM EDT at: https://attendee.gotowebinar.com/register/892252998861824272

FCC ISSUES ENFORCEMENT ADVISORY: RADIO USERS REMINDED NOT TO USE RADIOS IN CRIMES

FCC ENFORCEMENT ADVISORY DA 21-73 Released: January 17, 2021

WARNING: AMATEUR AND PERSONAL RADIO SERVICES LICENSEES AND OPERATORS MAY NOT USE RADIO EQUIPMENT TO COMMIT OR FACILITATE CRIMINAL ACTS

The Enforcement Bureau (Bureau) of the Federal Communications Commission issues this Enforcement Advisory to remind licensees in the Amateur Radio Service, as well as licensees and operators in the Personal Radio Services, that the Commission prohibits the use of radios in those services to commit or facilitate criminal acts.The Bureau has become aware of discussions on social media platforms suggesting that certain radio services regulated by the Commission may be an alternative to social media platforms for groups to communicate and coordinate future activities. The Bureau recognizes that these services can be used for a wide range of permitted purposes, including speech that is protected under the First Amendment of the U.S. Constitution. Amateur and Personal Radio Services, however, may not be used to commit or facilitate crimes. Specifically, the Bureau reminds amateur licensees that they are prohibited from transmitting "communications intended to facilitate a criminal act" or "messages encoded for the purpose of obscuring their meaning." 47 CFR § 97.113(a)(4).Likewise, individuals operating radios in the Personal Radio Services, a category that includes Citizens Band radios, Family Radio Service walkie-talkies, and General Mobile Radio Service, are prohibited from using those radios "in connection with any activity which is against Federal, State or local law." 47 CFR § 95.333(a). Individuals using radios in the Amateur or Personal Radio Services in this manner may be subject to severe penalties, including significant fines, seizure of the offending equipment, and, in some cases, criminal prosecution. 47 U.S.C. §§ 401, 501, 503, 510.Media inquiries should be directed to 202-418-0500 or MediaRelations@fcc.gov.To file a complaint with the FCC, visit https://consumercomplaints.fcc.gov or call 1-888-CALL-FCC. To report a crime, contact your local law enforcement office or the FBI.To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 418-0432 (TTY).

BIDEN TAPS JESSICA ROSENWORCEL AS ACTING FCC CHAIR

President Biden designated FCC Commissioner Jessica Rosenworcel as acting chair of the FCC. She succeeds, at least temporarily, former FCC chair Ajit Pai, who resigned effective on January 20.

"I am honored to be designated as the Acting Chairwoman of the Federal Communications Commission by President Biden," Rosenworcel said in a statement. "I thank the President for the opportunity to lead an agency with such a vital mission and talented staff. It is a privilege to serve the American people and work on their behalf to expand the reach of communications opportunity in the digital age."

Prior to joining the FCC, she served as Senior Communications Counsel for the United States Senate Committee on Commerce, Science, and Transportation. Before entering public service, she practiced communications law in Washington, DC.

The newest FCC commissioner, Nathan Simington, a Republican appointee, said Rosenworcel "brings deep knowledge and experience and highly informed judgment to her new position." He expressed appreciation that the Biden Administration acted promptly to establish FCC leadership by "selecting such a distinguished public servant for this vital role."

Fellow Democrat Geoffrey Starks said Rosenworcel "has been a passionate advocate for bringing the benefits of broadband to all Americans -- particularly our children." He said her designation as acting chair "comes at a critical juncture for the Commission, as COVID-19 has made bold action to end internet inequality more vital than ever."

The Commission's other Democratic appointee, Brendan Carr, called Rosenworcel "a talented and dedicated public servant, as evidenced by her 8 years of distinguished service on the FCC."

Rosenworcel has also been appointed as Defense Commissioner. Among other duties and responsibilities, the Defense Commissioner represents the FCC in interagency matters pertaining to public safety, homeland security, national security, emergency preparedness, disaster management, and defense and related matters, including those pertaining to continuity of essential FCC functions under emergency conditions.

A NEW VERSION OF WSJT-X IS NOW AVAILABLE

The *WSJT* Development Group has announced the general availability release of *WSJT-X* Version 2.3.0. A summary of new features can be found in the *WSJT-X 2.3* ***User Guide***. The ***Release Notes*** offer additional information, including a list of important program changes since the *WSJT-X 2.2*. Upgrading from earlier versions of *WSJT-X* should be seamless, and it's not necessary to uninstall a previous version or move any files. Installation packages for Windows, Linux, and Macintosh are available. A release candidate (i.e., beta version) *WSJT-X* version 2.4.0-rc will be available soon. Its main new feature is a mode called Q65,with unique capabilities for EME and scatter propagation modes.

MARS ANNOUNCES SCHEDULE OF DATES FOR 60-METER INTEROPERABILITY

The Military Auxiliary Radio System (MARS) has announced dates in 2021 during which MARS members will operate on 60 meters for interoperability with the amateur radio community. Some dates coincide with quarterly Department of Defense Communications Exercises (COMEX).

All exercises will begin on channel 1 as the initial calling channel and move to other 60-meter working channels as may be appropriate.

“In addition to voice calls, I want to introduce passing ICS 213 messages in both voice and digital modes to enhance the overall interop experience,” said US Army MARS Chief Paul English, WD8DBY. “Our exercises will yield the frequencies to other scheduled exercises or mission activations, which may be called by other agencies for interop support (e.g., hurricane, wildfire, etc).

We regularly instruct MARS members to work cooperatively with the amateur radio community during the use of the 60-meter interop channels. We will continue to track our 60-meter usage and activities.

English said he plans to provide a quarterly usage report of 60-meter interoperability activities.

February 23 – 27, Exercise: DOD COMEX 21-1, Location: CONUS
March 1 – 7, Exercise: Interop Outreach, Location CONUS
April 3 – 10, Exercise: Interop Outreach, Location CONUS
April 30 – May 6, Exercise: DOD COMEX 21-2
May 7 – 8, Exercise: Armed Forces Day Cross-Band Test, Location: CONUS
June 1 – 6, Exercise: Interop Outreach, Location CONUS
July 5 – 10, Exercise: Interop Outreach, Location CONUS
July 20 – 22, Exercise: DOD COMEX 21-3, Location: CONUS
August 2 – 8, Exercise: Interop Outreach, Location CONUS
September 1 – 6, Exercise: Interop Outreach, Location CONUS
October 1 – 31, Exercise: DOD COMEX 21-4 , Location: CONUS

FCC INVITES COMMENTS ON EXPANDING THE NUMBER OF VOLUNTEER EXAMINER COORDINATORS

In a January 5 *Public Notice*, the FCC requested comments on whether the current 14 Volunteer Examiner Coordinators (VECs) are sufficient to facilitate the efforts of their accredited Volunteer Examiners (VEs) in administering amateur radio examinations, or whether it should authorize up to five additional VECs. Comments are due by February 5, and reply comments are due by February 19. After Congress authorized it to do so, the FCC adopted rules in 1983 to allow volunteers to prepare and administer amateur radio examinations, and it established the system of VECs and VEs. The ARRL VEC is the largest of the 14 VECs in the US.

"VECs introduced consistency into the volunteer examiner program by centralizing accreditation of volunteer examiners, coordinating the dates and times for scheduling examinations, and managing the various administrative tasks arising from examinations," the FCC said. Authorized VECs may operate in any of the 13 VEC regions, but must service at least one region. The FCC pointed out that some VECs now offer remote examinations.

"The Commission has long maintained 14 VECs and now seeks to consider whether they continue to serve the evolving needs of the amateur community, or whether there are unmet needs that warrant considering expanding the number of VECs," the FCC said.

The FCC *Public Notice* provided questions for framing comments:

Are the existing 14 VECs sufficient to coordinate the efforts of Volunteer Examiners in preparing and administering examinations for amateur radio operator licenses, or are additional VECs needed?

What needs are currently being met, and which needs, if any, are not?

If the FCC were to allow additional VECs, how many more would be needed to satisfy existing Amateur Radio Service license examination needs? (The FCC indicated that it would likely cap the number of additional VECs at five.)

Given that VECs use a collaborative process to create examination question pools and volunteer examination administration protocols, would additional VECs enhance or hinder this process?

How would increasing the number of VECs address the unmet needs, if any, of the amateur radio community, and what obstacles or complications could result from increasing the number of VECs?

Interested parties may file short comments on WT Docket No. 21-2 via the FCC's Electronic Comment Filing Service (Express). Visit the FCC's "How to Comment on FCC Proceedings" page for information on filing extended comments.

NEW AMATEUR VLF TRANSATLANTIC RECORD SET

Very low frequency (VLF) enthusiast Joe Craig, VO1NA, reports that Stefan Schaefer, DK7FC, copied his 50-character message transmitted from Newfoundland on 8.271 kHz, with a radiated power of 10 mW. "This is a new record for amateur transatlantic VLF," Craig told ARRL. "The mode used was *EbNaut* by Paul Nicholson. *EbNaut* is a synchronous coherent BPSK mode for use at VLF and LF. Craig's tower supports a VLF RL (rotated L) 10-meter (33 feet) average height and 100 meters (328 feet) long. VLF is the ITU designation for radio spectrum in the range of 3 - 30 kHz, corresponding to wavelengths from 100 to 10 kilometers, respectively. "Since VLF waves can penetrate at least 40 meters (131 feet) into saltwater, they are used for military communication with submarines," Craig noted.

QSO TODAY VIRTUAL HAM EXPO TO INCLUDE SPEAKER TRACK ON AMATEUR RADIO SATELLITES

The QSO Today Virtual Ham Expo on March 13 – 14 will devote a speaker track to AMSAT and the world of amateur radio satellites.

The Expo is in “full planning mode” and promises “many exciting new things” for the upcoming event, which will include a world-class lineup of more than 60 speakers and workshops for beginners to experts. Presenters at nine AMSAT sessions will discuss the broad spectrum of ham radio satellites, including:

- Introduction to Amateur Radio Satellites (Douglas Quagliana, KA2UPW)
- Getting on the Air with Satellites (Clint Bradford, K6LCS)
- How to Enjoy Amateur Radio Contacts with the International Space Station (Frank Bauer, KA3HDO)
- Implementation of LDPC Encoder on FPGA (Anshul Makkar)
- Debris Mitigation in Earth’s Orbit (Anshul Makkar)
- Digital Multiplexing Transponder from the Open Research Institute (Michelle Thompson, W5NYV)
- Solving the ITAR and EAR Problem for the Amateur Radio Satellite Service (Michelle Thompson, W5NYV)
- Remote Labs for P4XT Engineering Development (Paul Williamson, KB5MU)

“There has never been a better time to be involved in amateur radio satellites, since some long-standing regulatory burdens have been lifted and advanced technology has never been more

affordable and accessible," Thompson remarked. "We have opportunities now that were not available as of even a few years ago. AMSAT is fortunate to contribute to the Expo by showcasing the truly amazing work going on around the world in the amateur satellite scene. And the Expo is an ideal partner to show it off to the wider ham audience."

AMSAT will have a booth at the Expo, where attendees can talk to experts, enthusiasts, operators, and technicians and obtain contact and membership information for the 30 AMSAT societies around the world.

Early Bird tickets are $10 (to help cover the cost of this event) and $12.50 "at the door." That includes entry for the live, 2-day event as well as access during the 30-day on-demand period following the event. Register on the QSO Today Virtual Ham Expo website.

ARRL is a QSO Today Virtual Ham Expo partner.

2021 CONSUMER ELECTRONICS SHOW MAKES HISTORY AS LARGEST DIGITAL TECH INDUSTRY EVENT

The first-ever, all-digital CES® 2021 made history as the largest digital tech event. Owned and produced by the Consumer Technology Association (CTA)®, the all-digital CES 2021 featured product launches from startups to tech giants, keynotes from global industry leaders, live entertainment from Hollywood and more than 100 hours of conference programming. Sessions covered pressing topics including privacy, the future of AI and health care, autonomous transportation, trends in retail and tech policy.

Almost 2000 companies launched products during the all-digital CES 2021, including almost 700 startups from 37 countries. Exhibiting companies included tech giants, such as Intel, LG Electronics, Panasonic, Samsung Electronics and Sony, as well as non-traditional tech companies, from AARP to Bridgestone, Caterpillar, Indy Autonomous Challenge, John Deere, L'Oréal, Moen and Procter & Gamble. New companies exhibiting at CES 2021 included ASUS, BioIntelliSense, Bose, Sono Motors and Volvo Penta.

The future of entertainment was reimagined at CES 2021, with a special event featuring Ryan Seacrest and music superstars Billie Eilish and Dua Lipa, as they discussed how tech has enabled the creation of a new immersive fan experience.

CES 2021 was truly a global event, with attendees joining from over 150 countries and over 1300 exhibitors coming from outside the United States, including more than 530 international startups. Country Group Organizers brought large delegations of exhibitors including Canada, France, Israel, Italy, Japan and South Korea. CES 2021 featured startups from Nigeria and Russia for the first time.

NEW AT CES - MILONET MESH NETWORK RE-IMAGINED FAMILY RADIO WITH PALM-SIZED ACTION COMMUNICATOR

This re-imagined family radio enables people within 2,000 feet of each other in outdoor environment to stay in contact, extended out by the MiloNet mesh network when your group spreads out. But instead of hand-held push-to-talk operation, the palm-sized Milo The Action Communicator works more like a Star Trek communication badge. Clipped to a pocket, handlebars, or an armband, the IP67 water- and dust-proof Milo, available in signature red, white and black, provides full-duplex group voice conversations on what the company describes as an all-day battery. For more precise communication, you can plug in or pair Bluetooth earphones to

them. Milo is developing a longer-range mode that, in testing, has exceeded more than a mile; new features will be delivered via regular software updates. (February, $169)

HAM RADIO'S SUITSAT RETURNS IN SHORT HORROR FILM

SuitSat makes an appearance in a new video short sci-fi thriller, called *Decommissioned*. "Inspired by true events," the video short resurrects the 2006 spacesuit/satellite that transmitted messages on 2 meters as it circled Earth. The original SuitSat-1 project, conceived by an Amateur Radio on the International Space Station (ARISS) team, repurposed a decommissioned Russian Orlan spacesuit to function as a free-floating amateur radio transmit-only satellite.

"ARISS designed and built an antenna and radio gear that got approved for installation into the suit, and cosmonaut Valeri Tokarev and Commander Bill McArthur, KC5ACR, put SuitSat-1 into orbit at the start of a spacewalk," ARISS-US Delegate for ARRL Rosalie White, K1STO, recounted. SuitSat-1 transmitted a voice message, "This is SuitSat-1 RS0RS!" in several languages, plus telemetry and a slow-scan TV image on an 8-minute cycle as it orbited Earth.

In the 6-minute film, a SuitSat returns in the future to haunt International Space Station Commander Diaz, played by Joey Vieira. Diaz is seen taking photos from inside an observation dome on the ISS when he spies some distant space debris and radios Houston to express concern.

"If there was any cause for alarm, you know we'd see it too," Houston assures him.

As the object closes in, an increasingly anxious Diaz recognizes the "debris" as SuitSat. "This is SuitSat," comes a voice on the ham radio.

"Houston, you're not gonna believe this. We're picking up transmissions on the ham radio that sound identical to the SuitSat experiment," he tells a skeptical mission control. "It's SuitSat! I'm seeing SuitSat!"

"SuitSat re-entered the atmosphere and burned up years ago," mission control responds. "It's impossible."

Decommissioned was produced by Perception Pictures and directed by Australian filmmaker Josh Tanner. He told Gizmodo that he produced the video "using the *Unreal Engine* technology that *The Mandalorian* used, albeit old-school rear projection, as opposed to the fancy LED wall tech they used."

A short video shows how *Decommissioned* was made.

SuitSat-1 -- called *Radioskaf* or Radio Sputnik in Russian -- was so successful that another unneeded Orlan spacesuit was subsequently refitted as SuitSat-2.

As an interesting sidebar with respect to the real SuitSat, White explained, "After the ARISS engineers calculated SuitSat-1's orbit and spin characteristics, they knew the legs and arms would have to be filled with something, so they asked the crew to stuff dirty laundry inside."

The original SuitSats were deorbited to burn up in Earth's atmosphere after their useful lives ended.

ARRL is a partner in the ARISS program, which has kept amateur radio on the air from the International Space Station for 20 years. A hallmark of the ARISS program is the scheduled ham radio contacts between ISS crew members and earthbound schools and student groups

TECHNICAL

SDR Technologies has released a Jetson Nano distribution with many SDR goodies already installed and ready to go. According to the **GitHub page**, it's built on Ubuntu 18.04, and includes *GNUradio* 3.8.2, *SoapySDR*, *GQRX* ***SigDigger***, *WSJT-X*, and more. Jetson Nano is a "small, powerful computer that lets you run multiple neural networks in parallel for applications like image classification, object detection, segmentation, and speech processing. All in an easy-to-use platform that runs in as little as 5 watts." 5 watts refers to the power consumption of the computer.

SHORTS

EUROPEAN UNION DX CONTEST TO DEBUT --The European Union DX Contest Club (EUDXCC) has announced the debut of the European Union DX Contest February 6 – 7 and on the first full weekend of February thereafter, starting at 1800 UTC on Saturday and ending at 1800 UTC on Sunday. A variety of operating categories are offered, including SWL, and everybody works everybody. Given the COVID-19 pandemic, the sponsors say that the multi-multi category will be a multi-transmitter distributed category, with no more than six transmitted signals (one per band) at any time from stations in different locations.

Japanese Antarctica Research Expedition (JARL) station 8J1RL will be active from February 2021 to January 2022 with Takumi, JG3PLH, at the helm. 8J1RL is located at the Japanese Syowa Station on East Ongul Island in eastern Antarctica. Activity will be on SSB, CW, and FT8, 7 - 28 MHz.

Bob, K0NR, noted a proposal of 146.58 MHz as a "North America Adventure Frequency" **to be used by 'OTA activities like Parks On The Air,** Summits On The Air, and so on. The need for an alternative to 146.52 is driven by a number of factors, including that the calling frequency can be busy with non-'OTA traffic, and that 'OTA traffic can be disruptive to "normal" traffic on 146.52 MHz

The Indian Ocean Island Nation of Mauritius Plans to Launch MIR-SAT (Mauritius Imagery and Radio Satellite 1) in 2021 – The project was the first winner of the 2018 round of the United Nations Office for Outer Space Affairs (UNOOSA) and Japan Aerospace Exploration Agency (JAXA) KiboCUBE Program. The CubeSat will carry an amateur radio V/U digipeater (a downlink of 436.925 MHz has been coordinated). It's expected that JAXA will launch MIR-SAT1 to the International Space Station (ISS) in February for deployment in May or June, according to ***Space in Africa***. The 1U nanosatellite was designed by a team of Mauritian engineers and an experienced radio amateur from the Mauritius Amateur Radio Society in collaboration with experts from AAC Clyde Space UK.

Two new member-societies have been proposed for IARU membership. The Amateur Radio Union of the Kyrgyz Republic (ARUKR) and the Bahrain Amateur Radio Society (BARS) have been proposed for approval by the International Amateur Radio Union (IARU) as member-societies. Before taking up the BARS application, the status of Amateur Radio Association of Bahrain (ARAB), whose membership rights were suspended in 2016, had to be determined. "Following an investigation, both the Region 1 Executive Committee and the IARU Administrative Council are satisfied that ARAB no longer exists," IARU said. Member-societies proposed for membership are subject to a vote by current member-societies.

The February 6 *NCJ*-sponsored North American Sprint (CW) and the March 13 RTTY Sprint will begin 1 hour earlier. The sprints will get under way at 2300 UTC instead of 0000 UTC, and end at 0259 UTC. Moving the start earlier will give participants in the north and east a larger window for 20-meter activity. The new start times in February and March are provisional and will be evaluated after the contests. The September North American Sprint start times will not

change. The log submission deadline is 7 days from the end of the contest. Submit logs via the uploader app. The North American Sprint web page includes rules, results, team registration, and other information. A "how-to" article by Jim George, N3BB, is available under "Tips" at the lower right-hand side of the Sprint web page. -- *Thanks to CW Sprint Manager Ward Silver, N0AX*

THANKS FOR READING !

THE RCA ARC MONTHLY NEWSLETTER IS COMPILED AND EDITED BY JIM RINEHART, K9RU AND JIM KEETH, AF9A. ALL MATERIAL CONTAINED HEREIN IS OBTAINED FROM THE SOURCES CREDITED AND EDITED FOR THIS NEWSLETTER. EMAIL TO mail to: WebMaster@w9rca.org. Check our web site at http://www.w9rca.org